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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NICHOLAS JAMES ADAMS

Appeal 2009-002851
Application 10/797,223
U.S. Patent Publication 2004-0206666
Technology Center 1700

Decided: August 19, 2009

Before: FRED E. McKELVEY, *Senior Administrative Patent Judge*,
and JAMESON LEE and SALLY GARDNER LANE, *Administrative Patent
Judges*.

McKELVEY, *Senior Administrative Patent Judge*.

DECISION ON APPEAL

- 1 A. Statement of the case
- 2 Shell Oil Company ("Shell"), the real party in interest, seeks review
- 3 under 35 U.S.C. § 134(a) of a final rejection (mailed 16 July 2007).
- 4 Claims 1-9 are in the application.

1 [1] a platinum component, wherein the platinum is present in
2 said catalyst composition in the range of from 0.1 to 5.0% by weight,
3 [2] a silica binder and
4 [3] zeolite crystallites having pores consisting of 12 oxygen
5 atoms,
6 wherein the zeolite crystallites have a constraint index (CI)
7 larger than 1 and
8 wherein the weight ratio of said zeolite crystallites to said silica
9 binder is in the range of from 5:95 to 95:5; and
10 yielding a product effluent comprising
11 [a] a base oil fraction and
12 [b] a gas oil fraction
13 wherein said gas oil fraction is larger than the fraction of said
14 product effluent boiling below said gas oil fraction.

15 C. Discussion

16 The Examiner's Answer lays out the Examiner's position in rather
17 clear terms.

18 Upon consideration of Shell's arguments in its Appeal Brief and Reply
19 Brief, we find no basis for questioning the accuracy of the Examiner's
20 findings; they are more than supported by Van Ballegoy.

21 Likewise, the Examiner has addressed Shell's arguments.

22 Upon consideration of Shell's arguments and the Examiner's findings
23 and conclusions with respect to those arguments, Shell has not convinced us
24 that the Examiner has erred in rejecting claim 1 under § 103.

1 We will affirm for the reasons given by the Examiner, adding the
2 following remarks to emphasize certain points involved in the appeal.

3 The Examiner found that Van Ballegoy does not explicitly describe
4 the fact that MTW has pore sizes consisting of 12 oxygen atoms.
5 Examiner's Answer, page 4. The Examiner turned to Chen to show that, as
6 of 1994 (Van Ballegoy having been filed as early as 1998 in the EPO),
7 MTW was known as a ZSM-12 zeolite having channel size of 12—meaning
8 12 oxygen atoms. It is not clear that the Examiner had to rely on Chen.
9 Why? Van Ballegoy says that MTW-type topology includes ZSM-12, as for
10 example described in U.S. Patent 3,832,449 (Van Ballegoy page 7:28-30).
11 Shell says essentially the same thing—MTW type zeolites include ZSM-12
12 as described in U.S. Patent 3,822,499 (Specification, page 6:2-4). We feel
13 comfortable finding, as did the Examiner, that the Van Ballegoy ZSM-12
14 has the 12 oxygen atom requirement of claim 1.

15 Shell argues that Van Ballegoy does not describe a process which
16 produces "gas oil." Appeal Brief, pages 4-6. Given that Shell is in the
17 refining business, we cannot help but feel that Shell may be playing ostrich
18 in this case.

19 We cannot imagine that Shell would deny that one skilled in the art
20 knows that when a lubricating base oil is refined in a dewaxing process,
21 various hydrocarbon "fractions" result. Nor can we imagine that Shell
22 would deny that one skilled in the art knows that the fractions obtained, and
23 in what amounts, is a function of various parameters including the catalyst
24 used. One skilled in the art is taught by Van Ballegoy the following
25 (page 17:6-20):

The effluent from the catalytic dewaxing process . . . is separated into a gaseous fraction and a liquid fraction. Such separation or fractionation can be attained by conventional methods, such as by distillation under atmospheric or reduced pressure. Of these, distillation under reduced pressure . . . is most suitably applied. The cutpoint(s) of the distillate fraction(s) is/are selected such that each product distillate recovered has the desired properties for its envisaged application. For lubricating base oils, the cutpoint will normally be at least 280 °C and will normally not exceed 400 °C, the exact cutpoint being determined by the desired product properties, such as volatility, viscosity, viscosity index and pour point.

Example 2a of Van Ballegoy states (*id.* 19:7-14):

Example 1 was repeated except that a catalyst was used consisted of 90 wt % silica binder, 10 wt % ZSM-12 powder and a platinum loading of 0.7 wt %. The crystal size of the ZSM-12 crystallites was 1 µm and the extrudate was dealuminated as in Example 1. The properties of the obtained lubricating base oil product and the yield of catalytic dewaxing experiment are given in Table II.

Table II (Product Characteristics) (*id.* 20) reveals that:

- (1) the catalyst had ZSM-12 size = 1-2 µm.
- (2) the reaction temperature was 358 °C.
- (3) Yield was 91% wt.

(4) Gas makeup was 2.9% wt.

(5) Pour point was -16 °C.

(6) Viscosity Index (VI) was 108.

What is *not* set out in Table II, or otherwise discussed in Example 2a, is what other products were obtained.

In presenting its appeal, Shell does not deny that the Van Ballegoy process may result in production of some gas oil. Rather, Shell simply says Van Ballegoy does not *explicitly* describe obtaining any gas oil. But, if Shell obtains gas oil using ZSM-12, then one skilled in the art would reasonably expect that Van Ballegoy also would obtain gas oil. The amount of gas oil cannot be determined on this record. Likewise, not capable of determination is whether the gas oil fraction is larger or smaller than the fraction of the effluent boiling below the gas oil fraction. By boiling "below," we think Shell means boils at a lower temperature than the boiling point of gas oil. For this reason, reference is made in the record to "lighter components" (e.g. Examiner's Answer, page 8:1). Lighter components have a lower boiling point than heavier components.

The Examiner's conclusion is that one skilled in the art would know that Van Ballegoy produces a product comprising (1) lubricating base oil, (2) gas oil and (3) other materials. Examiner's Answer, page 7. We agree with the Examiner. However, the Examiner—or the USPTO for that matter—has no means by which to perform experiments and make measurements to confirm or deny whether more gas oil is produced than "lighter components." As we noted earlier, Shell cannot play ostrich to the fact that some gas oil is more than likely produced by the Van Ballegoy

1 process when a ZSM-12 catalyst is used. If Shell seeks to further prosecute
2 the application through an RCE or a continuation, Shell may wish to
3 consider undertaking some experimental work and report any results of that
4 experimental work to the Examiner.

5 Shell also maintains that ZSM-12 catalyst is only one of many
6 catalysts described by Van Ballegoy. The fact is that Van Ballegoy's
7 description of ZSM-12 (e.g., Van Ballegoy Example 2a) puts its use for
8 making lubricating oil (as well as other fractions) in the public domain.
9 Unexplained, and unestablished, on this record is why Shell is entitled to
10 remove the use of ZSM-12 from the public domain.

11 We have considered Shell's remaining arguments and find none that
12 warrant reversal of the Examiner's rejections. *Cf. Hartman v. Nicholson*,
13 483 F.3d 1311, 1315 (Fed. Cir. 2007).

14 D. Decision

15 Shell has not sustained its burden on appeal of showing that the
16 Examiner erred in rejecting the claims on appeal as being unpatentable under
17 § 103 over the prior art.

18 On the record before us, Shell is not entitled to a patent containing
19 claims 1-9.

1 Upon consideration of the appeal, and for the reasons given herein,
2 it is

3 ORDERED that the decision of the Examiner rejecting
4 claims 1-9 over the prior art is *affirmed*.

5 FURTHER ORDERED that no time period for taking any
6 subsequent action in connection with this appeal may be extended under
7 37 C.F.R. § 1.136(a)(1)(iv) (2008).

AFFIRMED

KMF

cc (via First Class mail)

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